

### **REMARKS/ARGUMENTS**

#### ***Claim Rejections – 35 USC § 102***

The Examiner rejected claims 1-4, 6-10, 12-14, 16, 18, 20, 23, 24, 27, 29-31 and 45 as being clearly anticipated by Fan et al. (US 6,444,467).

The claims of this application have been amended and now all claims require the solid component is in the nutrient medium to be present at a concentration up to 10% (w/v). This limitation is based on the disclosure, page 9, lines 10 and 11.

Before the effect of this additional limitation is discussed, Applicant would like address one point made by the Examiner in the final action. On page 3 of the Action of June 11, 2007, the Examiner commented on Applicant's previous argument that, as shown in Fig. 2 of the present application, the surface of the growth medium is provided with a droplet of a flowable semi-solid medium to form a pool that contains both nutrients for the plant and solid particles. The Examiner stated:

“This is not found persuasive because applicants are arguing limitations which are not claimed.”

This statement apparently applied to claim 45 that had been newly introduced because claim 45 was included in the Section 102 rejection. However, claim 45 does indeed contain this limitation. The claim requires dispensing of a quantity of the nutrient medium to form a pool of the nutrient medium and contacting the plant embryo or germinant with the nutrient medium in such a manner that the pool of nutrient medium provides the embryo or germinant with physical support to maintain a generally upright growth orientation. The nutrient medium is defined earlier in the claim as containing nutrients and solid particles.

Accordingly, Applicant request a reconsideration of the allowability of claim 45 in view of these limitations in the claim.

Regarding the 10% limit on solid particles now present in the amended claims, the following comments are provided.

It is abundantly clear from the specification of the present application that nutrient medium is intended to be used as a short-term source of both nutrients and physical support (by

virtue of the solid particles present in the medium) for embryos or germinants newly sown onto a porous growth medium (a three-phase substrate containing air, liquid and solid) until root growth takes place to the extent that the newly developing seedling is capable of supporting itself and gathering nutrient from other sources (see, for example, page 7, lines 4 to 9). To make this possible, the solids content of the medium must not be so high that the medium cannot be dispensed onto the substrate in the desired way (see page 8, lines 22 and 23), although there must be sufficient particles present to provide the necessary temporary support when the flowable component of the nutrient medium has dissipated (see, for example, page 32, lines 3 to 5). This latter requirement was previously present in the main claims (e.g. see the final part of claim 1). The limitation of 10% for the solid particles now introduced into the main claims covers the concentration ranges for particles of different kinds that are effective to allow adequate dispensing onto the porous substrate. For example, it can be seen from page 42, lines 22 to 24, the effective maximum amount for alpha-cellulose was found to be 7% w/v. The added limitation thus ensures that the nutrient medium has the desired fluidity to allow it to be dispensed onto the porous substrate.

It is also believed that this new limitation distinguishes the present invention even more clearly from Fan et al. It must be that the Examiner considers the three-phase substrate of Fan et al. (when soaked with a nutrient solution) to be equivalent to the nutrient medium of the present invention, which Applicant does not. The nutrient medium of the present application is clearly intended for use with a three-phase planting substrate of the kind disclosed by Fan et al., rather than as a replacement for such a substrate. However, in view of the amendment now made to the main claims, the substrate of Fan et al. does not qualify as a nutrient medium of the kind required by the claims because its solids content would be too high.

Even when the three-phase substrate of Fan et al. is treated with a nutrient solution to the extent that the moisture content rises to a maximum of 60 – 85% (claim 23), this means that the substrate has at least 15% non-solids (without even raising the issue of what is meant in the Fan et al. disclosure by “moisture content” as, according to some usage, this is based on the weight of dry components, or a percentage of the saturation amount, rather than total weight or volume of the moist materials). Hence, the amended claims are not anticipated by Fan et al.

Since the three-phase substrate of Fan et al. does not disclose a solids content as low as 10%, and since all of the claims are now contain such a requirement, it is believed that this amendment should overcome the § 102 rejection of all the remaining claims.

***Claim Rejections – 35 USC §103***

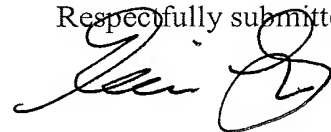
The rejections of claims 15, 17, 19 and 32, and claims 21, 22, 25, 26 and 28 based on Fan et al. in combination with other references is not applicable following the amendment of the claims mentioned above. All of these claims now require the presence of 10% or less of the solid component, and this is not disclosed in Fan et al.

Bearing in mind that the substrate of Fan et al., even when “drenched” with nutrient solution, is to receive embryos for germination and growth (i.e. to act as a growth medium), there would be no reason for a skilled artisan to use less of the solids than the minimum of 15% because the plantlets thereby produced clearly need support in the substrate for their roots and emerging stems. It is only when a medium intended to be used in conjunction with a planting substrate is contemplated, as in the present invention, and one in which a dissipation of the flowable content is presumed, that the presence of such a low percentage of solids (10% or less) can be contemplated. Such a use of the substrate of Fan et al. is neither disclosed in nor suggested by Fan et al. It is therefore believed that none of the claims is obvious over Fan et al. taken alone.

The other references cited in combination with Fan et al. are relied on by the Examiner to show the use of the features of the specific rejected claims, but none of these features addresses the concentration of the particulate solids. It is therefore believed that the additional references, taken in combination with Fan et al., do not make the subject matter of the rejected claims, or any other claims, obvious over the art.

Accordingly, reconsideration of the amended claims is respectfully requested.

Respectfully submitted,



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